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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,902	07/24/2000	KEITH LAKER	KC-043	2555

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EXAMINER

COLE, LAURA C

ART UNIT PAPER NUMBER

1744

DATE MAILED: 06/30/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/600,902

Applicant(s)

LAKER, KEITH

Examiner

Laura C Cole

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-32 is/are pending in the application.
- 4a) Of the above claim(s) 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-30 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 11.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. The finality of the previous office action, Paper No. 9, is withdrawn.

Election/Restrictions

2. Claim 31 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 11.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armell et al., USPN 5,819,353 in view of Woehleke, USPN 5,797,993.

Armell et al. disclose a tool that comprises a cylindrical elongate body (Figure 1 (1)), one or more blades mounted on the body (Figures 1-2 (12), wherein the brushes may be blade-like or could even comprise blades, Column 5 Lines 51-53) wherein each blade comprises one or more reaction surfaces (as shown in Figure 2 a blade such as a brush "scraper" has a plurality of reaction surfaces of bristles, or a blade in general can have one or a plurality of reaction surfaces), and a peripheral edge configured to perform a rotational cleaning action (Figure 2, the raised portion connected to (13) wherein (12) is positioned has peripheral sides or edges that lead to the channel (13)), each blade comprises at least one fluid by-pass path to permit a flow of fluid to pass

Art Unit: 1744

(Figure 2 (13); Column 2 Line 60 to Column 3 Line 12), wherein each blade may be manufactured from a composite (Column 5 Lines 46-51). There is a plurality of blades and each pair defines a void in between (Figures 1-2, each pair of blades (12) has a void (13) in between, being the bypass path or there is an axial void between blades as seen in Figure 1). Another embodiment of Armell et al. is for a use when the blades of a pig comprise a maximum outside diameter greater than an internal diameter of the tubing (Column 3 Lines 48-52.)

Woehleke discloses an expandable pipeline pig assembly wherein each diaphragm is manufactured from a composite comprising a para-aramid fiber produced from poly-paraphenylene terephthalamide (herein referred to by its common brand name KEVLAR®) as it has "sufficient strength, flexibility, and durability" and "is not soluble to any substantial degree in the oil, gas, or anti-corrosive agent found in pipelines" (Column 9 Lines 31-38). Woehleke further discloses that the body has means for connection to mechanical driving means wherein the spring (Figure 1 (165)) comprises the mechanical driving means and the connection comprises the collar (Figure 1 (130)).

It would have been obvious for one of ordinary skill in the art to modify the blades of Armell et al. and use the material KEVLAR® as Woehleke teaches for desired physical and chemical characteristics such as strength, flexibility, durability, and insolubility for various elements that are commonly found in pipelines.

Art Unit: 1744

4. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armell et al., USPN 5,819,353 in view of Woehleke, USPN 5,797,993 and in further view of Nose et al., USPN 5,068,142.

Armell et al. and Woehleke disclose all elements previously mentioned, however do not disclose a composite further including carbon or glass fiber.

Nose et al. discloses a fiber-reinforced polymeric resin composite material that comprises at least one of the following reinforcing fibers such as carbon fibers, glass fibers, and wholly aromatic polyamide (aramide) fibers (Column 4 Lines 40-44).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add additional composites to the blades of Armell et al. and Woehleke such as carbon or glass fiber to provide a higher thermal stability or mechanical strength as Nose et al. teaches (abstract).

5. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armell et al., USPN 5,819,353 in view of Woehleke, USPN 5,797,993 and in further view of Knapp, USPN 4,603,449.

Armell et al. and Woehleke discloses all elements previously mentioned. Armell et al. in addition disclose a mandrel for connection to a workstring (Column 1 Lines 30-42). Neither Armell et al. or Woehleke disclose a combination of blades has a watermelon shaped profile.

Knapp discloses a unitized pig body for paraffin removal that comprises discs that are in a watermelon profile so that joints (or irregularities) within a pipeline are effectively cleaned (Figure 1; Column 3 Lines 1-3).

Art Unit: 1744

It would have been obvious for one of ordinary skill in the art to modify the profile of Armell et al. by adding additional blades of varying diameter to create a watermelon shape as Knapp teaches in order to make the pig more adaptable to a greater variation of bore diameters.

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armell et al., USPN 5,819,353 in view of Woehleke, USPN 5,797,993 and in further view of Nishino, USPN 4,081,875.

Armell et al. and Woehleke disclose all elements above however do not provide a method of cleaning a tubular bore with a pressurized fluid to rotate a pig. Further, Armell et al. arranges blades helically on the sleeve (Column 2 Lines 62-67; Figure 1 (12) and (13)).

Nishino discloses a scale removing device that has a singular blade (Figures 1, 2, and 4 (2)) that is in the form of a helix, wherein the method of use requires inserting the pig into the bore and providing a pressurized fluid to the bore which in turn applies a force to the blade which urges the pig to travel in an axial direction, rotate, and orbit around its bore (Column 4 Lines 14-55).

It would have been obvious for one of ordinary skill in the art to employ Armell et al. in the method that Nishino teaches, since the blades of Armell et al. form several blade helixes longitudinally and have a plurality fluid by-pass means so that the pig may be flushed through a bore without further mechanical support.

Applicants Arguments

7. In the response, Paper No. 11 filed 13 June 2003 the Applicant argues that Woehleke does not disclose a rotational cleaning action with a fluid by-pass path, but an umbrella-like expandable cleaning action with diaphragms that seal and do not allow fluid to pass through.

Response to Arguments

8. Applicant's arguments, see Paper No. 11, filed 13 June 2003, with respect to the rejection(s) of claim(s) 26, 29, and 32 under Woehleke have been fully considered and are persuasive. The Woehleke reference does not have a fluid by-pass path as initially thought. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Armell et al., USPN 5,819,353 and Nishino, USPN 4,081,875.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C Cole whose telephone number is (703) 305-7279. The examiner can normally be reached on Monday-Thursday, 7am - 4:30pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Warden can be reached on (703) 308-2920. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

Art Unit: 1744

746-8772 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

LCC
LCC
June 27, 2003

Robert J. Warden, Sr.
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